



## Methods of ortho alkylation

**Description of Technology:** The present invention pertains to improved methods for the preparation of ortho alkylated aromatic alcohols and amines.

### Patent Listing:

1. **US Patent No. 7,145,035**, Issued December 5, 2006, "Methods of ortho alkylation"  
<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F7145035>

**Market Potential:** Orthoalkylated anilines and phenols are important building blocks in the preparation of plant protection agents, pharmaceuticals and other fine chemicals. Classical Friedel-Crafts alkylation of anilines and phenols typically leads to para as well as ortho alkylation, and furthermore often results in polyalkylation. While Friedel-Crafts acylation of anilines and phenols typically gives only monosubstitution, substitution still can occur at the para as well as ortho positions, and reaction conditions needed for reductive removal of the acyl carbonyl moiety may be incompatible with other functionality on the molecule.

In view of the process requirements and limitations of methods cited in previous arts, further improvements are still needed to effect the desulfurization conversion of Formula ii to Formula iii. Such an improvement has now been discovered.

### Benefits:

- Positively effects the desulfurization conversion of Formula ii to Formula iii

### Applications:

- Agrochemicals
- Pharmaceutical industry

### Contact: Ken Anderson

Director, Entrepreneurial & Small Business Support, Delaware Economic Development Office (DEDO)  
Cavel State Building, 820 French Street, Wilmington, DE, 19801  
Phone: (302) 577-8496, Fax: (302) 577-8499, Email: [Kenneth.R.Anderson@state.de.us](mailto:Kenneth.R.Anderson@state.de.us)